PROTO
RESOURCES & INVESTMENTS LTD

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Technology and Leach Work Update

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Proto Resources & Investments Ltd ("Proto", "the Company") is pleased to provide an update on work being undertaken on the Definitive Feasibility Study ("DFS") for its flagship Barnes Hill nickel-cobalt project and on the innovative waste stream processing technology currently being developed by its 50%-owned subsidiary, Barrier Bay Pty Ltd ("Barrier Bay").

Executive Summary

- Recently shipped bulk samples of Barnes Hill saprolite ore are undergoing a series of DFS leaching tests to confirm both the rate of nickel recovery and the acid consumption of the ore.
- The second batch of anion exchange membranes supplied by General Electric ("GE", NYSE: GE) has undergone and passed extensive quality control testing.
- The first commercial Barrier Bay pilot operated on a batch production system, with the five-stage process broken down into five components. The design of an integrated cell has now been completed to allow the reconstruction of the pilot plant to operate on a continuous production basis that will commence operation from January 2012.

DFS Leaching Testwork

Proto recently shipped bulk samples of Barnes Hill saprolite ore to the Australian BioRefining Pty Ltd facilities in northern New South Wales. This ore is now undergoing a series of leaching tests to determine both the rate of nickel recovery and its acid consumption. This data will assist Proto's joint venture partner on Barnes Hill, Metals Finance Limited ("Metals Finance", ASX: MFC) in finalising the DFS by Q2 2012.

Currently, smaller-scale bottle roll testwork is being undertaken on a diverse set of Barnes Hill samples to provide comprehensive data across the distribution of ore types found (Figure 1 below). This method is replicating agitated leach and is expected to be finalised within two weeks. Larger-scale 30kg atmospheric vat leach testwork is being run in parallel with the bottle roll testing (Figure 2 below). These tests are providing data on the Barnes Hill ore under a range of test conditions, principally:

- Slurried versus dry ore placement in vats;
- The effect of acid charge on the ore; and,

Proto Resources & Investments Ltd
ACN: 108 507 517

Suite 1901, Level 19, 109 Pitt St,
Sydney 2000 NSW Australia
PO Box R1870
Royal Exchange NSW 1225

p: +61 2 9225 4000
f: +61 2 9235 3889
e: info@protoresources.com.au
w: www.protoresources.com.au

- Different feed flow rates of the acid and intermediate liquor solution.

With the data set from previous test work already in hand, completion of these tests will provide a strong degree of confidence in the results, and be suitable for 'definitive' purposes. It is expected that the larger scale tests will commence towards the end of January with a target completion date of the end of April next year, in sufficient time for solid conclusions to be incorporated into the final study.

Figure 1 (left) – Bottle roll testwork on Barnes Hill saprolite samples
Figure 2 (right) – 30kg atmospheric vat leach testwork

GE Membranes Pass Extensive Testing

The second batch of anion exchange membranes (Figures 3 and 4 below) supplied by GE has undergone extensive quality control testing over the past four weeks, with all testwork proving encouraging. The membranes are of key importance to the Barrier Bay process as they provide a means for sulphuric acid to accumulate in one half of the cell (the anolyte), from where it can be recycled, and for water to accumulate in the other half of the cell (the catholyte), from where it can also be recycled. It is the extent to which these two inputs can be separately recycled that is central to the economics of the Barrier Bay process.

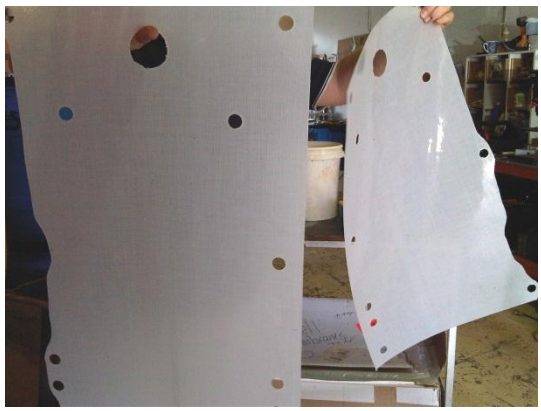

Figure 3 (left) – A close-up shot of the GE anion exchange membrane
Figure 4 (right) – Membranes cut to size prior to being inserted into the pilot cell

STOCK EXCHANGE ANNOUNCEMENT

Reconstruction of the Barrier Bay Pilot

The first commercial Barrier Bay pilot was designed for the treatment of third party material from Western Australia and was consequently built with the five-stage process broken down into five distinct components that were operated under batch production methods, one for each stage as follows:

- Stage 1 – Reduction of Fe^{3+} to Fe^{2+}
- Stage 2 – Ion Exchange "IX" (extraction of nickel and cobalt)
- Stage 3 – Extraction of FeO and Fe_2O_3 (mixed iron oxide product)
- Stage 4 – Extraction of mixed hydroxide product ("MHP")
- Stage 5 – Extraction of $Mg(OH)_2$ (magnesium hydroxide)

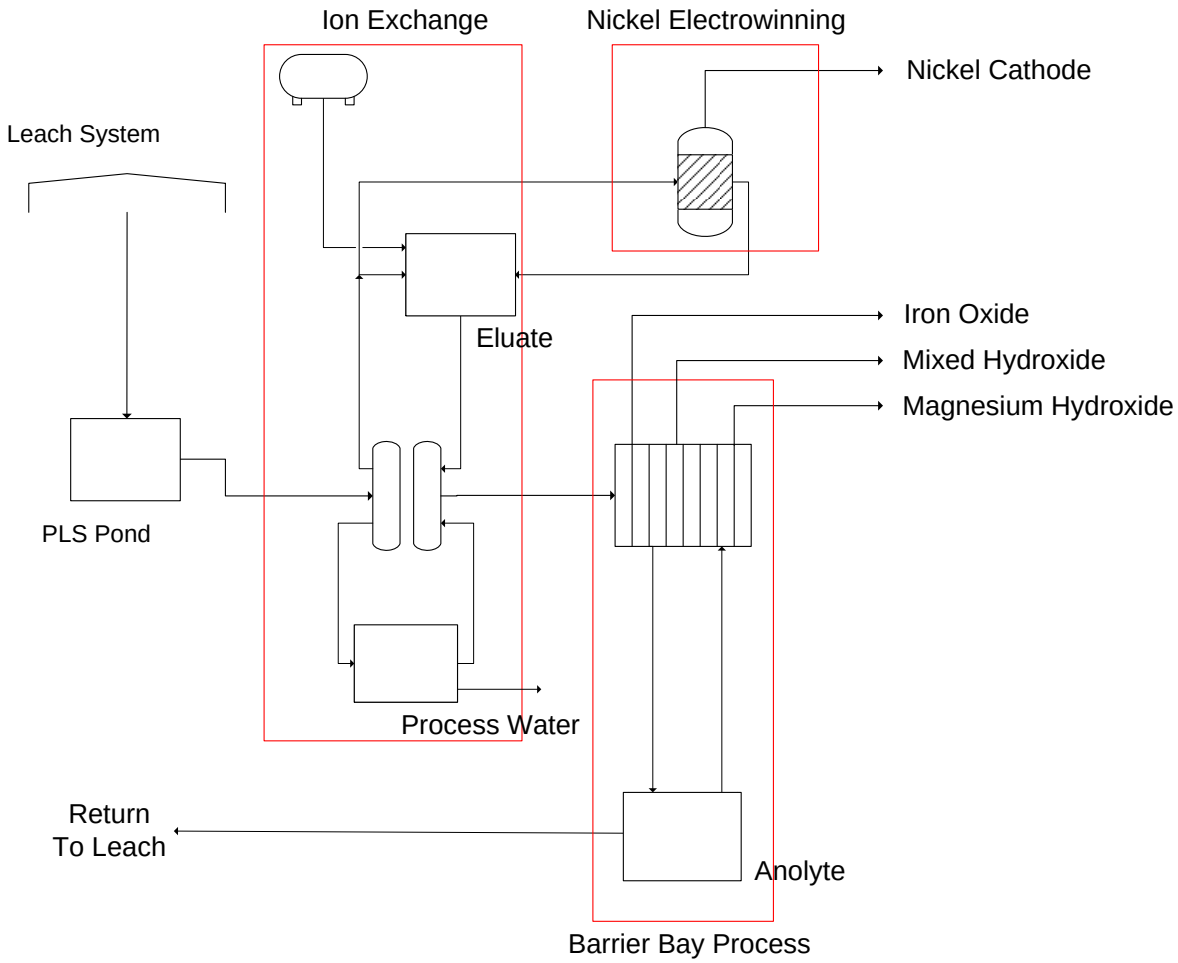

Figure 5 – Process flow diagram of the reconstructed pilot plant

The IX stage will use a specialised low pH ion exchange resin supplied by the Dow Chemical Company (NYSE: DOW) (see Figure 6 below). Metals Finance and Dow Chemical recently signed a letter of intent to collaborate on the technology for Metals Finance's Lucky Break project. In terms of the new Barrier Bay pilot, the IX stage at the front-end of the process will remain the same.

In advancing the Barrier Bay technology, the other four stages of the process, previously separated into four components, will now take place in one integrated component cell. The design of the other stages of the process has now been completed to allow the reconstruction of the pilot plant to operate on a continuous production flow across the stages. This is done by integrating them into a single cell. Figure 5 (above) summarises the reconstructed pilot process. This new cell (Figure 7 below) consists of 22 individual cells and the pilot program is designed to demonstrate the scalability of the Barrier Bay process.

Figure 6 (left) – Dow Chemical selective nickel low-pH Ion Exchange resin
Figure 7 (right) – The new cell designed for the Barnes Hill flowsheet moving into position

With completion of the reconfiguration of the process, the pilot remains on schedule for operation from January 2012. The fact that Barnes Hill ore will be pilot the Barrier Bay technology first provides the Company with substantial early-mover advantages and Proto looks forward to updating the market on progress as it continues to advance Barnes Hill towards production.

Enquiries:

Mr Andrew Mortimer
Managing Director
Proto Resources & Investments Ltd
Office: +61 (2) 9225 4000
Mobile: +61 (0)433 894 923